

WHAT IS CLAIMED IS:

1 1. A method for protecting publicly accessible network computer
2 services from undesirable network traffic in real-time, the method comprising:
3 receiving network traffic destined for the services;
4 analyzing the network traffic to identify an undesirable user of the
5 services; and
6 limiting access of the undesirable user to the services to protect the
7 services.

1 2. The method as claimed in claim 1 wherein the undesirable
2 network traffic includes denial of service attacks.

1 3. The method as claimed in claim 1 wherein the network is the
2 Internet.

1 4. The method as claimed in claim 1 further comprising
2 generating one or more user profiles from the network traffic wherein the step of
3 analyzing includes the step of comparing the one or more user profiles with a
4 predetermined profile to determine the undesirable user.

1 5. The method as claimed in claim 4 wherein the step of
2 generating the one or more user profiles includes the step of generating request
3 statistics for the user from the network traffic.

1 6. The method as claimed in claim 5 wherein the request
2 statistics include connection statistics and service request distributions.

1 7. The method as claimed in claim 6 wherein the network is the
2 Internet and wherein the step of generating request statistics includes the steps of
3 collecting and correlating Border Gateway Protocol (BGP) data from the Internet to
4 obtain the service request distributions.

1 8. The method as claimed in claim 7 wherein the step of
2 correlating includes the step of identifying a topologically clustered set of machines
3 in the Internet based on the data and wherein the service request distributions are
4 generated from the set of machines.

1 9. A system for protecting publicly accessible network computer
2 services from undesirable network traffic in real-time, the system comprising:
3 an interface for receiving network traffic destined for the services;
4 a analysis engine for analyzing the network traffic to identify an
5 undesirable user of the services; and
6 a forwarding engine in communication with the analysis engine for
7 limiting access of the undesirable user to the services to protect the services.

1 10. The system as claimed in claim 9 wherein the undesirable
2 network traffic includes denial of service attacks.

1 11. The system as claimed in claim 9 wherein the network is the
2 Internet.

1 12. The system as claimed in claim 9 wherein the forwarding
2 engine generates one or more user profiles from the network traffic and wherein the
3 analysis engine compares the one or more user profiles with a predetermined profile
4 to determine the undesirable user.

1 13. The system as claimed in claim 12 wherein the forwarding
2 engine generates the user profile by generating request statistics for the user from
3 the network traffic.

1 14. The system as claimed in claim 13 wherein the request
2 statistics include connection statistics and service request distributions.

1 15. The system as claimed in claim 14 wherein the network is the
2 Internet and wherein the forwarding engine collects and correlates Border Gateway
3 Protocol (BGP) data from the Internet to obtain the service request distributions.

1 16. The system as claimed in claim 15 wherein the forwarding
2 engine identifies a topologically clustered set of machines in the Internet based on
3 the data and wherein the service request distributions are generated from the set of
4 machines.

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